TESTIMONY OF STEVEN K. YOUNG

FOR

DUKE POWER COMPANY

PSCSC DOCKET NO. 95-006-E

Q. PLEASE STATE YOUR NAME, ADDRESS AND POSITION WITH DUKE POWER COMPANY.

A. My name is Steven K. Young and my business address is 422 South Church Street, Charlotte, North Carolina 28202. I am Manager of Duke Power Company's Rate Department. My current responsibilities include jurisdictional cost-of service allocations and the design and administration of Duke's rates.

Q. STATE BRIEFLY YOUR EDUCATION, ACCOUNTING BACKGROUND AND PROFESSIONAL AFFILIATIONS.

A. I am a graduate of the University of North Carolina, with a Bachelor of Science in Business Administration. I am a Certified Public Accountant and a Certified Managerial Accountant, with memberships in the American Institute of Certified Public Accountants, the Institute of Managerial Accountants, and the National Association of Accountants. I am also a member of the Edison Electric Institute Rate Research Committee.

Q. PLEASE DESCRIBE YOUR BUSINESS BACKGROUND AND EXPERIENCE.

A. I began my employment with Duke in the Controller's Department in July 1980, and became Supervisor of Catawba Interconnect Systems in May 1986. In November 1988, I became Director of Catawba Accounting . In September 1991, I became Manager of Bulk Power Agreements in the System Planning and Operating Department. In November 1992, I became Manager of the Rate Department.

Q. ARE YOU FAMILIAR WITH THE ACCOUNTING PROCEDURES AND BOOKS OF ACCOUNT OF DUKE POWER COMPANY?

A. Yes, as ordered by this Commission, the books of account of Duke Power Company follow the uniform classification of accounts prescribed by the Federal Energy Regulatory Commission.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is as follows:

1. To summarize the Company's procedures in accounting for fuel.
2. To update the actual fuel cost data reviewed in these proceedings. Actual fuel costs through March 1995 were presented in the last hearing. April 1995 through September 1995 actual fuel costs are available and included in the exhibits accompanying my testimony.
3. To summarize the performance of the Company's nuclear generating system during the period April 1995 through September 1995.
4. To discuss the fuel recovery results for the period June 1995 through November 1995.
5. To provide and explain the Company's computations for the projected fuel costs for the six-month period December 1995 through May 1996.

Q. WOULD YOU EXPLAIN THE RELATIONSHIPS BETWEEN THE TIME PERIODS INDICATED IN YOUR LAST ANSWER?

A. The purpose of this hearing is to set the fuel factor for bills rendered during the six-month period December 1995 through May 1996 and review actual fuel costs incurred in the current six-month period. The fuel factor for the period June 1995 through November 1995 was established in May 1995. Actual fuel cost information is now available for each month in the current period except October and November 1995. Also, April and May 1995 fuel cost information, which was estimated for the last fuel hearing, is now presented on an actual basis.

Q. MR. YOUNG, CAN YOU EXPLAIN HOW THE MONTHLY COAL COSTS CHARGED TO EXPENSE ARE DERIVED?

A. All the Company's coal is delivered by rail. As that coal is received by each plant, it is weighed and sampled for quality verification. Subsequently, the purchasing department compares the weight, price and quality with the purchase order and railroad waybill. Adjustments are made to the cost of coal purchased in those cases where the quality of coal received varies from contract specifications for BTU (British Thermal Unit) and ash content.

Moisture and BTU tests are also made as the coal is delivered to the coal bunkers for each boiler. BTU tests measure the energy content of the coal. To the extent that the moisture content of coal burned differs from the moisture content of coal purchased, an adjustment is subsequently made to the inventory tonnage. Wet coal weighs heavy and without the moisture adjustment, tons burned would be overstated and inventory would be understated.

Coal costs charged to expense are calculated on an individual plant basis. The expense charge is the product of the tons of coal conveyed to the bunkers for a generating unit during the month times the average cost of the coal. The number of tons is determined by using scales located on the conveyor belt running to the unit's coal bunkers. The average cost reflects the total cost of coal on hand as of the beginning of the month, computed using the moving average inventory methodology, plus the cost of coal delivered to the plant during the month. The cost of coal is determined from the invoice for the coal and the freight bill and does not include any nonfuel cost or coal handling cost at the generating plant.

Physical inventories using aerial surveys are conducted annually. No adjustments to book inventory have been needed since January 1994.

Q. PLEASE DISCUSS THE PERFORMANCE OF DUKE POWER COMPANY'S FOSSIL GENERATING SYSTEM.

A. In 1994 the fossil steam generating plants provided 38% of the Company's total generation. The heat rate for the fossil system was 9338 BTU/KWH, a slight improvement from the previous year. The lower heat rate indicates that the generating system is using less heat energy from fuel to generate electrical energy. The Company's fossil generating system continues to have one of the best heat rates in the industry. For 21 of the last 24 years that industry data has been available, it has ranked number 1 in efficiency. If Duke's system had operated at the average heat rate of the top 10 systems, fuel costs would have been approximately 17 million dollars higher during the most recent calendar year that industry data was available.

Q. PLEASE EXPLAIN HOW MONTHLY NUCLEAR COSTS CHARGED TO EXPENSES ARE DERIVED.

A. Nuclear fuel expense for the month is based on the energy output in Mbtu's of each fuel assembly in the core, nuclear fuel disposal costs and the DOE Decontamination and Decommissioning Fund Fee.

The cost of each fuel assembly is determined when the fuel is loaded in the reactor. The costs include yellowcake (uranium), conversion, enrichment, and fabrication. An estimate of the energy content of each fuel assembly is also made. A cost per Mbtu is determined by dividing the cost of the assembly by its expected energy output. Each month, an engineering calculation of the Mbtu output of an assembly is priced at its cost per Mbtu.

During the life of a fuel assembly, the expected energy output may change as a result of actual plant operations. When this occurs, changes are made in the cost per Mbtu for the remaining energy output of the assembly. New fuel assembly orders are planned for either a sixteen or eighteen month cycle . The length of a cycle is the duration of time between when a unit starts up after a refueling and when it starts up after its next refueling. During a refueling approximately one-third of the fuel in the reactor is replaced.

Q. I REFER YOU TO YOUNG EXHIBITS 1 THROUGH 6 AND ASK WHETHER EACH OF THESE EXHIBITS WAS PREPARED BY YOU OR AT YOUR DIRECTION AND UNDER YOUR SUPERVISION?

A. Yes, each of these exhibits was either prepared by me or at my direction and under my supervision.

Q. MR. YOUNG, WHAT IS THE MAGNITUDE OF THE COMPANY'S MONTHLY FUEL COSTS?

A. Young Exhibit 1 sets forth the total system monthly actual fuel costs (as burned) that the Company has experienced from April 1995 through September 1995. It also shows the dollar amounts associated with each type of generation and total MWH generated. The oil and gas usage was for light off fuel used to start up our coal plants and for combustion turbine generation. The fluctuation in total fuel costs in this period is primarily the result of the refueling outages of the nuclear units, weather sensitive sales and the availability of hydro generation. Actual KWH sales for the period April 1995 through September 1995 were 3.9% above forecast. During this same period, hydro generation was approximately equal to the median. The median hydro generation is computed for each calendar month by selecting the value of generation for that calendar month that is greater than the generation values for that calendar month during 15 years of a 31 year (1964-1994) period and less than the generation values for that calendar month during 15 years for that same period.

Q. MR. YOUNG, WHAT IS THE MAGNITUDE OF THE COMPANY'S FUEL COST AS RELATED TO THE TOTAL COST OF SERVICE?

A. Fuel costs continue to represent the largest cost item incurred in providing electric service. For the twelve months ended September 31, 1995, fuel and purchased power fuel costs of $772 million represented 18% of the Company's total revenue. Coal costs are the largest fuel cost component, equaling 62% of the Company's fuel bill.

Q. MR. YOUNG, WHAT HAS HAPPENED TO THE UNIT COST OF FUEL DURING RECENT REPORTING PERIODS?

A. Young Exhibits 2a and 2b graphically portray the "as burned" cost of both coal and nuclear fuel in cents per million BTU (MBTU) for the twelve month ended periods of July 1993 through September 1995. As the graph (Exhibit 2a) shows, coal costs have been generally flat during this period. The trend of coal prices reflects price reductions resulting from contract renegotiations, as well as the timing of purchases in the spot market. Nuclear fuel costs have increased slightly during recent periods (Exhibit 2b). This is primarily due to the amortization of the nuclear fuel expense related to the annual fee paid to the DOE for the Decontamination and Decommissioning Fund.

While the unit prices of each type of fuel have shown little volatility in the recent past, we can expect our composite cost of fuel to increase. Our future KWH growth will be primarily met from the Company's coal generating units and the cost of coal is about three times the cost of nuclear fuel.

Q. MR. YOUNG, WHAT DOES YOUR EXHIBIT 3 SHOW?

A. Young Exhibit 3 graphically shows generation by source for the current and projected test periods as well as three prior periods. The variations in total generation reflect seasonal fluctuations. The level of nuclear generation reflects the maintenance and refueling outages during the periods.

Q. MR. YOUNG, WOULD YOU PLEASE DISCUSS THE PERFORMANCE OF THE COMPANY'S NUCLEAR GENERATING SYSTEM DURING THE LAST SIX MONTHS?

A. Yes. Our nuclear units continue to run very well. The nuclear system recently set a new company record for concurrent operation of all units. Duke has seven nuclear units in its system capability. With the refueling requirements, maintenance requirements, NRC operating requirements, and the complexity of operating nuclear generating units our system will nearly always have the equivalent of at least one nuclear unit out of service. Young Exhibit 4 shows the monthly capacity factors of the Company's nuclear generating facilities both for the past six months and estimated for October 1995 through May 1996. An explanation of actual and forecasted outages of a week or more during this time period is also provided on that exhibit. Oconee Unit 3 was the only unit down for refueling and maintenance during some portion of the past six months. Catawba Unit 2 began a refueling outage on October 6 and Oconee Unit 1 is scheduled to begin a refueling outage on November 2. During the next six month test period, McGuire Units 1 and 2 and Oconee Unit 2 are also scheduled for refueling outages. Other outages during the current period included an outage at Oconee 1 to repair several control rod drive mechanisms involving the replacement of nine of their thermal barriers. Oconee 2 was also out for repairs due to leaking expansion joints in the condenser. Twenty - six expansion joints were replaced. Also during that same outage, twelve control rod drive mechanisms were repaired involving replacement of their thermal barriers. There were also some other outages of short duration during the period that are indicative of the complexity of a nuclear plant.

Q. MR. YOUNG, DO YOU BELIEVE THE COMPANY'S ACTUAL FUEL COSTS INCURRED FOR THE PERIOD APRIL 1995 THROUGH SEPTEMBER 1995 TO BE REASONABLE?

A. Yes, I believe the costs are reasonable, meet the guideline test set forth in Subsection (E) of Section 58-27-865 of the South Carolina statutes and reflect the Company's efforts in maintaining reliability of service and an economical generation mix, thereby minimizing the total cost of providing service to our South Carolina customers.

The performance of our nuclear units equals or exceeds that of comparable facilities, as shown below:

Duke system actual capacity factors

April 1995 - September 1995	92 %	1 unit refueled
October 1994 - March 1995	85 %	4 units refueled
12 months ended Sept. 1995	89 %	
Calendar 1994	82 %	

National average capacity factors

North America Electric Reliability Council (NERC) data for PWR's

Calendar years 1993 and 1994	74%
5 year 1990 - 1994	73%

Q. WHAT FUEL FACTORS HAS THIS COMMISSION APPROVED IN THE PAST?

A. The following table shows the approved factors since 1979, when the current procedure began:

Period	Periods	Cents per KWH
June 1979 - May 1980	2	1.3500¢
June 1980 - May 1981	2	1.2250¢
June 1981 - November 1981	1	1.5000¢
December 1981 - May 1982	1	1.5750¢
June 1982 - November 1982	1	1.6500¢
December 1982 - May 1983	1	1.6000¢
June 1983 - May 1984	2	1.3750¢
Eff. 3/84		1.0500¢
June 1984 - November 1984	1	1.1250¢
December 1984 - November 1985	2	1.2500¢
Eff. 10/8/85		1.1199¢
December 1985 - November 1986	2	1.1199¢
Eff. 11/5/86		0.9806¢
December 1986 - May 1987	1	0.9806¢
June 1987 - November 1987	1	1.1500¢
December 1987 - November 1988	2	1.2500¢
December 1988 - November 1989	2	1.0750¢
December 1989 - May 1990	1	1.0500¢
June 1990 - November 1990	1	1.0000¢
December 1990 - November 1991	2	1.1000¢
December 1991 - May 1992	1	1.0000¢
June 1992 - November 1993	3	0.9500¢
December 1993 - November 1995	4	1.0000¢

Q. WHAT HAS BEEN THE COMPANY'S FUEL RECOVERY EXPERIENCE DURING THE PERIOD APRIL 1995 TO SEPTEMBER 1995?

A. Young Exhibit 5 shows the actual fuel costs incurred for the period April 1995 through September 1995, the estimated fuel costs for October and November 1995 and the over-recovery carried forward at the beginning of the period. The fuel costs incurred are compared to the approved rates. The Company started the period over-recovered by $4,616,000 as shown on line 11. As shown on line 12, the Company is estimated to end the period with an over-recovery balance of $842,000 in a deferred account.

Q. MR. YOUNG, WHAT IS THE COST OF FUEL THE COMPANY PROJECTS FOR THE PERIOD DECEMBER 1995 THROUGH MAY 1996?

A. Young Exhibit 6 sets forth the projected cost of fuel for the next six-month period, December 1995 through May 1996. As shown on line 7, the fuel cost per KWH for the period is estimated to be 1.0114 ¢/KWH. After adjusting for the cumulative variance of fuel cost recovery shown on Young Exhibit 5, the adjusted fuel costs are 1.0033 ¢/KWH, excluding revenue related taxes.

Q. WHAT WAS THE BASIS YOU USED IN MAKING THIS PROJECTION?

A. The latest available information has been used in developing the projections shown on Young Exhibit 6. For example, the projection of KWH sales is based on the Company's latest KWH sales projection. Also, the latest available data on fuel prices and nuclear outage schedules have been used. The forecast for hydro generation reflects the median hydro. The forecasted cost of nuclear fuel reflects the nuclear capacity factors presented in Young Exhibit 4.

Q. MR. YOUNG, WHAT IS THE FUEL FACTOR THE COMPANY PROPOSES FOR INCLUSION IN BASE RATES EFFECTIVE DECEMBER 1, 1995?

A. The Company proposes that a fuel factor of 1.00 ¢/KWH be continued in base rates, effective December 1, 1995. Based on our estimates, this fuel factor would first refund the over-recovery balance at the beginning of the period and the remainder would recover a portion of the fuel costs incurred during the period, resulting in an under-recovery balance at the end of May 1996. This factor balances out over/under-recoveries of fuel costs over time and is in keeping with the spirit of the statute to allow utilities to recover prudently incurred fuel costs "in a manner that tends to ensure public confidence and minimize abrupt changes in charges to consumers." As shown on page 10, the current fuel factor has been set at 1.00 ¢/KWH for four consecutive 6-month periods, thus minimizing abrupt changes in charges to consumers.

Q. MR. YOUNG, DOES THAT CONCLUDE YOUR TESTIMONY?

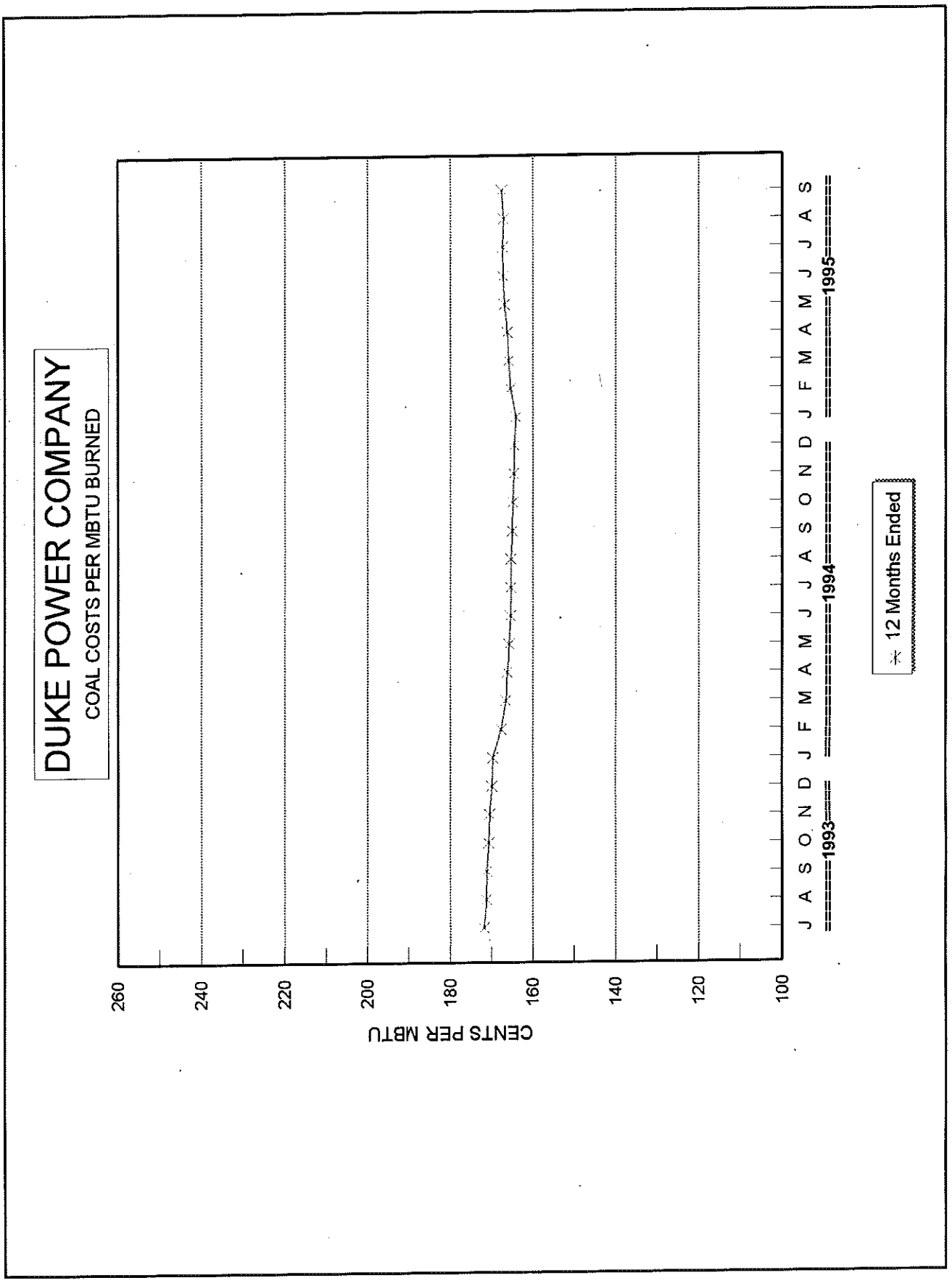
A. Yes, it does.

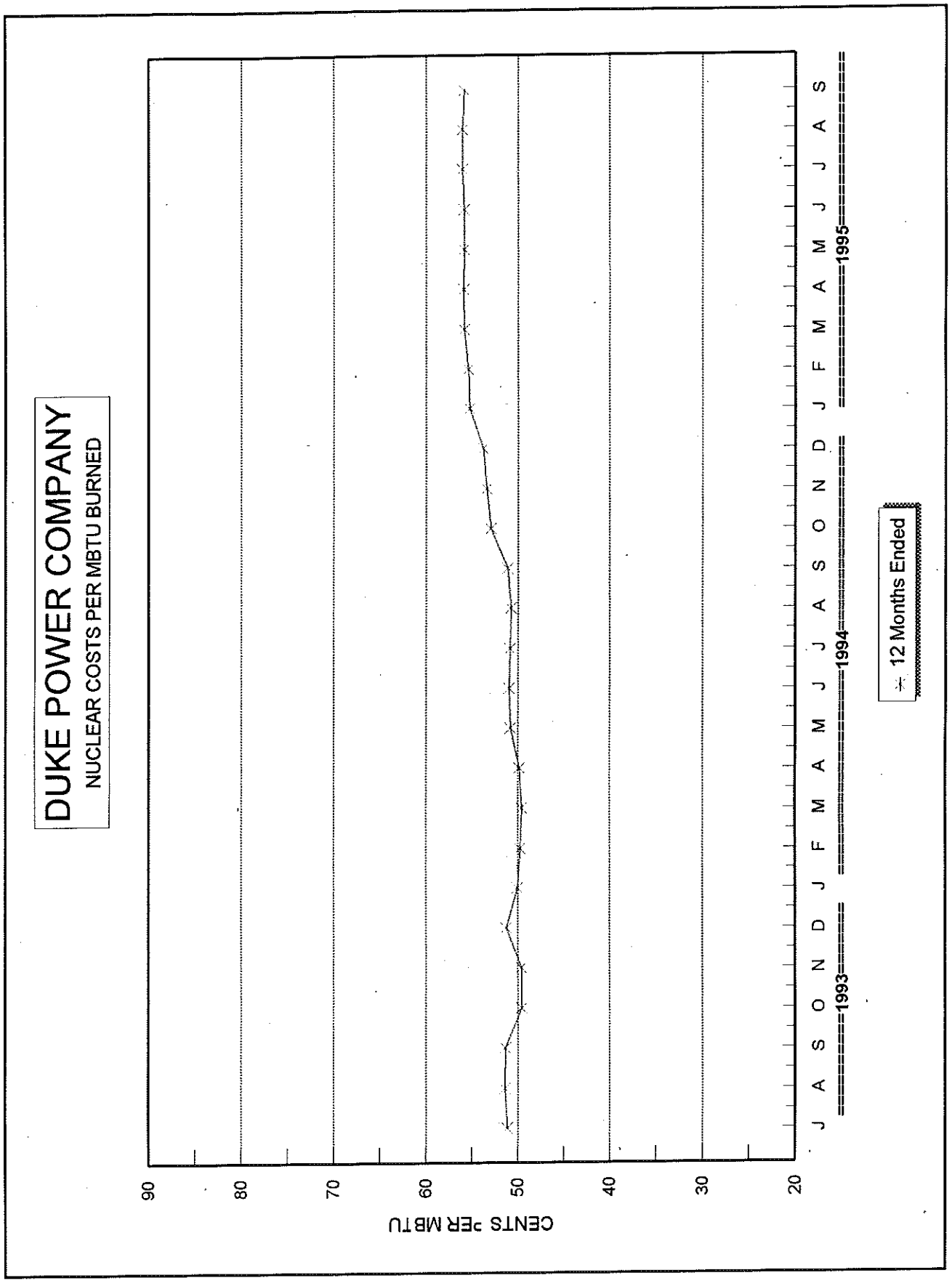
DUKE POWER COMPANY
SOUTH CAROLINA FUEL CLAUSE
NOVEMBER 1995 HEARING
TOTAL COMPANY FUEL COST
(000)

	Month	Coal	Oil	Gas	Nuclear	Total	MWH Generation
					See Note 1		See Notes 1 & 2
1	Monthly Average - Prior Period: 12 months ended March 1995	$40,285	$333	$112	$17,898	$58,628	5,748,908
2	April 1995	$25,159	$943	$461	$18,777	$45,340	4,997,806
3	May 1995	$40,278	$485	$475	$17,749	$58,987	5,751,185
4	June 1995	$44,605	$562	$304	$17,325	$62,796	5,861,726
5	July 1995	$63,224	$535	$459	$18,132	$82,350	7,126,651
6	August 1995	$62,762	$1,213	$2,583	$20,904	$87,462	7,780,861
7	September 1995	$32,397	$350	$391	$19,549	$52,687	5,508,763
8	Monthly Average - Current Period: 6 months ended September 1995	$44,738	$681	$779	$18,739	$64,937	6,171,165

Notes:
1. Includes Duke's 12.5% ownership in Catawba.
2. Excludes Hydro generation.

YOUNG EXHIBIT 1


DUKE POWER COMPANY
COAL COSTS PER MBTU BURNED
CENTS PER MBTU
260
240
220
200
180
160
140
120
100
J A S O N D J F M A M J J A S O N D J F M A M J J A S
1993
1994
1995
12 Months Ended


DUKE POWER COMPANY
NUCLEAR COSTS PER MBTU BURNED
CENTS PER MBTU
90
80
70
60
50
40
30
20
J A S O N D J F M A M J J A S O N D J F M A M J J A S
1993
1994
1995
12 Months Ended

DUKE POWER COMPANY
SOUTH CAROLINA FUEL CLAUSE
NOVEMBER 1995 HEARING
NUCLEAR PLANT PERFORMANCE

CAPACITY FACTORS

Current		Forecast /A	
April 95	93%	December	79%
May	86%	January 1996	86%
June	89%	February	95%
July	88%	March	94%
August	99%	April	70%
September	97%	May	84%
October (Estimate / A)	82%		
November (Estimate / A)	76%		

NUCLEAR OUTAGES LASTING ONE WEEK OR MORE

UPDATE

Current			Forecast		
Nuclear Unit	Date of Outage	Explanation of Outage	Nuclear Unit	Date of Outage	Explanation of Outage
Oconee #1	4/27/95 - 5/9/95	Repair of Control Rod Drive Mechanisms	McGuire #1	12/8/95 - 1/20/96	Refueling, inspection and maintenance.
Oconee #2	5/4/95 - 5/23/95	Repair of leaking Expansion Joints and Repair of Control Rod Drive Mechanisms	McGuire #2	3/29/96 - 5/13/96	Refueling, inspection and maintenance.
Oconee #3	6/6/95 - 7/23/95	Refueling, inspection, maintenance and repairs. (includes 9.15 days of unscheduled delays)	Oconee #2	4/05/96 - 5/15/96	Refueling, inspection and maintenance.
Catawba #2	10/6/95-11/17/95	Refueling, inspection and maintenance.			
Oconee #1	11/2/95-12/11/95	Refueling, inspection and maintenance.			

YOUNG EXHIBIT 4

SOUTH CAROLINA FUEL CLAUSE
NOVEMBER 1995 HEARING
APRIL 1995 - NOVEMBER 1995
(000)

		ACTUAL						ESTIMATED	ESTIMATED
		APRIL 1995	MAY 1995	JUNE 1995	JULY 1995	AUGUST 1995	SEPTEMBER 1995	OCTOBER 1995	NOVEMBER 1995
1	Fossil fuel	$26,563	$41,238	$45,471	$64,218	$66,558	$33,139	$34,395	$39,549
2	Nuclear fuel	$18,777	$17,749	$17,325	$18,132	$20,904	$19,549	$19,272	$16,120
3	Fuel in purchased power	$5,002	$4,533	$5,493	$5,075	$6,349	$5,392	$1,701	$2,487
4	Fuel in intersystem sales	($3,043)	($3,875)	($3,630)	($5,984)	($11,918)	($3,294)	($2,914)	($2,874)
5	Total fuel costs	$47,299	$59,645	$64,659	$81,441	$81,893	$54,786	$52,455	$55,282
6	Total KWH sales (system less intersystem)	5,297,662	5,505,538	6,054,076	6,642,172	7,421,193	6,553,880	5,591,254	5,241,948
7	Fuel costs incurred per KWH (line 5/line 6)	0.8928 ¢	1.0834 ¢	1.0680 ¢	1.2261 ¢	1.1035 ¢	0.8359 ¢	0.9382 ¢	1.0546 ¢
8	Fuel costs billed per KWH	1.0000 ¢	1.0000 ¢	1.0000 ¢	1.0000 ¢	1.0000 ¢	1.0000 ¢	1.0000 ¢	1.0000 ¢
9	South Carolina KWH sales	1,593,074	1,680,106	1,782,042	1,868,381	2,096,167	1,914,643	1,703,187	1,533,244
10	Variance (over) under ((line 7 - line 8)/100 x line 9)	($1,708)	$1,401	$1,212	$4,224	$2,170	($3,142)	($1,053)	$837
11	Variance (over) under from prior period	($4,616)							
12	Cumulative variance (over) under	($6,491) *	($5,090)	($3,878)	$346	$2,516	($626)	($1,679)	($842)

* The Cumulative variance for April has been increased by (167) thousand to reflect additional Department of Energy refund pertaining to nuclear fuel disposal costs.

YOUNG EXHIBIT 5

DUKE POWER COMPANY
SOUTH CAROLINA FUEL CLAUSE
NOVEMBER 1995 HEARING
FORECAST FOR DECEMBER 1995 - MAY 1996
(000)

		DECEMBER 1996	JANUARY 1996	FEBRUARY 1996	MARCH 1996	APRIL 1996	MAY 1996	Total
1	Fossil fuel	53,719	47,892	35,210	30,097	43,674	37,357	$247,949
2	Nuclear fuel	15,701	17,301	18,470	19,254	11,711	16,333	$98,769
3	Fuel in purchased power	4,813	3,225	4,037	6,075	4,910	5,922	$28,982
4	Fuel in intersystem sales	(2,874)	(2,834)	(2,650)	(2,492)	(2,645)	(2,645)	($16,138)
5	Total fuel costs	$71,359	$65,584	$55,067	$52,934	$57,651	$56,967	$359,562
6	Total KWH sales (system less intersystem)	6,604,584	6,091,038	6,048,922	5,865,971	5,522,720	5,418,443	35,551,679
7	Fuel costs incurred per KWH (line 5/line 6) * 100	1.0804 ¢	1.0767 ¢	0.9104 ¢	0.9024 ¢	1.0439 ¢	1.0514 ¢	1.0114 ¢
8	South Carolina KWH sales	1,812,206	1,712,399	1,770,331	1,741,213	1,655,961	1,648,096	10,340,206
9	South Carolina fuel costs (L.7 *L.8 /100)							$104,581
10	Variance (over)under from Exhibit 5							($842)
11	Adjusted South Carolina fuel costs (L.9 + L.10)							$103,739
12	Adjusted South Carolina fuel costs per KWH (line 11/line 8) * 100							1.0033 ¢

YOUNG EXHIBIT 6